Figure 2

T7 promoter

AGATCTCGATCCCGCGAAATTAATACGACTCACTATAGGGGAATTGTGAGCGGATAACAATTCCCC

RBS

TCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGATATACC

                                         NdeI

ATGGGCAGCAGCCATCATCATCATCATCACAGCAGCGGCCTGGTGCCGCGCGGCAGC**CATATG**GGATCC
GG

 M   G   S   S   H   H   H   H   H   H   S   S   G   L   V   P   R   G   S   H   M ------
--

        StuI   **SalI**

AATTCAAAGGCCTAC**GTCGAC**TAGAGCCTGCAGT*CTCGA*CCATCATCATCATCATCATTAATAAAAGGG
CG

------------------------ *

                     SpeI **BamHI**

*AATTCCAGCACACTGGCGGCCGTT***ACTAGT**GGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTT
GG

  IVEX-3 Primer

      Bpu1102 I   **T7 terminator**

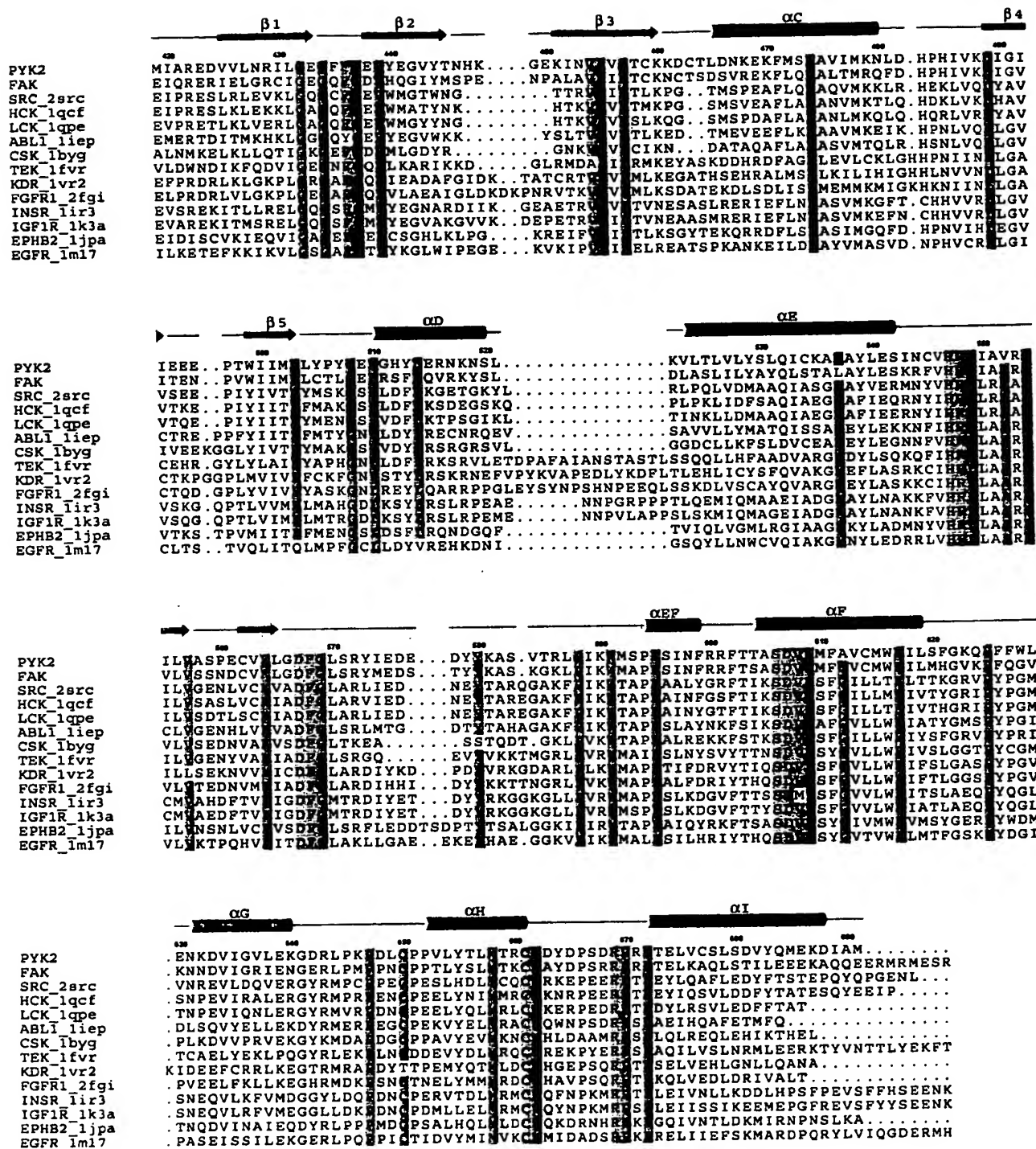CTGCTGCCACCGCTGAGCAATAACTAGCATAACCCCTTGGGGCCTCTAAACGGGTCTTGAGGGGTTTTT
TG

          3'-PET Primer

Figure 3

β1 β2 β3 αC β4

PYK2   MIAREDVVLNRIL EF E YEGVYTNHK....GEKIN V TCKKDCTLDNKEKFMS AVIMKNLD.HPHIVK IGI
FAK   EIQRERIELGRCIGE QZ D HQGIYMSPE....NPALA V TCKNCTSDSVREKFLQ ALTMRQFD.HPHIVK IGV
SRC_2src EIPRESLRLEVKL GQ CF E WMGTWNG.......TTR I TLKPG.TMSPEAFLQ AQVMKKLR.HEKLVQ YAV
HCK_1qcf EIPRESLKLEKKL A QP E WMATYNK.......HTK V TMKPG..SMSVEAFLA ANVMKTLQ.HDKLVK HAV
LCK_1qpe EVPRETLKLVERL A QR E WMGYYNG.......HTK V SLKQG..SMSPDAFLA ANLMKQLQ.HQRLVR YAV
ABLI_1iep EMERTDITMKHKL G QY E YEGVWKK.......YSLT V TLKED..TMEVEEFLK AAVMKEIK.HPNLVQ LGV
CSK_1byg ALNMKELKLLQTI K E D MLGDYR.........GNK V CIKN...DATAQAFLA ASVMTQLR.HSNLVQ LGV
TEK_1fvr VLDWNDIKFQDVIGE NK Q LKARIKKD.....GLRMDA I RMKEYASKDDHRDPAG LEVLCKLGHHPNII N LGA
KDR_1vr2 EFPRDRLKLGKPL R A Q IEADAPGIDK..TATCRT V MLKEGATHSEHRALMS LKILIHIGHHLNVVN LGA
FGFR1_2fgi ELPRDRLVLGKPL E A QQ VLAEAIGLDKDKPNRVTK V MLKSDATEKDLSDLIS MEMMKMIGKHKNII N LGA
INSR_1ir3 EVSREKITLLREL Q SM YEGNARDIIK..GEAETR V TVNESASLRERIEFLN ASVMKGFT.CHHVVR LGV
IGF1R_1k3a EVAREKITMSREL Q SM YEGVAKGVVK..DEPETR I TVNEAASMRERIEFLN ASVMKEFN.CHHVVR LGV
EPHB2_1jpa EIDISCVKIEQVI A E E CSGHLKLPG....KREIF I TLKSGYTEKQRRDFLS ASIMGQFD.HPNVIH EGV
EGFR_1m17 ILKETEFKKIKVL GS A T YKGLWIPEGE...KVKIP I ELREATSPKANKEILD AYVMASVD.NPHVCR LGI

β5 αD αE

PYK2   IEEE..PTWIIM LYPY E GHY ERNKNSL................KVLTLVLYSLQICKA AYLESINCV HI IAVR
FAK   ITEN..PVWIIM LCTL E RSF QVRKYSL................DLASLILYAYQLSTALAYLESKRFVH IA A
SRC_2src VSEE..PIYIVT YMSK S LDF KGETGKYL...............RLPQLVDMAAQIASG AYVERMNYVH LR A
HCK_1qcf VTKE..PIYIIT FMAK S LDF KSDEGSKQ..............TINKLLDMAAQIAEG AFIEQRNYIH LR A
LCK_1qpe VTQE..PIYIIT YMEN S VDF KTPSGIKL..............SAVVLLYMATQISSA EYLEKKNFIH LA R
ABLI_1iep CTRE.PPFYIIT FMTY N LDY RECNRQEV..............GGDCLLKPSLDVCEA EYLEGNNFVH LA R
CSK_1byg IVEEKGGLYIVT YMAK S VDY RSRGRSVL...............DYLSQKQFIH LA R
TEK_1fvr CEHR.GYLYLAI YAPH N LDF RKSRVLETDPAFAIANSTASTLSSQQLLHPAADVARG EFLASRKCIH LA R
KDR_1vr2 CTKPGGPLMVIV FCKF GN STY RSKRNEFVPYKVAPEDLYKDFLTLEHLICYSFQVAKG EYLASKKCIH LA R
FGFR1_2fgi CTQD.GPLYVIV YASK GN REY QARRPPGLEYSYNPSHNPEEQLSSKDLVSCAYQVARG EYLNAKKFVH LA R
INSR_1ir3 VSKG.QPTLVVM LMAH D KSY RSLRPEAE......NNPGRPPPTLQEMIQMAAEIADG AYLNAKKFVH LA R
IGF1R_1k3a VSQG.QPTLVVM LMTR GD KSY RSLRPEME......NNPVLAPPSLSKMIQMAGEIADG AYLNANKFVH LA R
EPHB2_1jpa VTKS.TPVMIIT FMEN G S DSF RQNDGQF................TVIQLVGMLRGIAAG KYLADMNYVH LA R
EGFR_1m17 CLTS..TVQLITQLMPF G CLLDYVREHKDNI.............GSQYLLNWCVQIAKG NYLEDRRLVH LA R

αEP αF

PYK2   IL ASPECV LGDF LSRYIEDE...DY KAS.VTRL IK MSP SINFRRFTTAS MPAVCMW ILSFGKQ FFWL
FAK   VL SSNDCV LGDF LSRYMEDS...TY KAS.KGKL IK MAP SINRRFTSAS MF VCMW ILMHGVK FQGV
SRC_2src IL GENLVC VADF LARLIED....NE TARQGAKF IK TAP AINFGSFTIKS SF ILLM IVTYGRI YPGM
HCK_1qcf IL SASLVC IADF LARVIED....NE TAREGAKF IK TAP AINYGTFTIKS SF ILLT IVTHGRI YPGM
LCK_1qpe IL SDTLSC IADF LARLIED....NE TAREGAKF IK TAP AINYGTFTIKS SF ILLT IVTYGMS YPGI
ABLI_1iep CL GENHLV VSDF LTKEA.....SSTQDT.GKL VK TAP ALREKKFSTKS AF VLLW IYSFGRV YPRI
CSK_1byg VL SEDNVA VSDF LTKEA......SSTQDT.GKL VK TAP SLNYSVYTTNS SY VLLW IVSLGGT YCGM
TEK_1fvr IL GENYVA IADF LSRGQ......EV VKKTMGRL VR MAI SLNYSVYTTNG SY VLLW IFSLGAS YPGV
KDR_1vr2 ILLSEKNVV ICDF LARDIYKD...PD VRKGDARL LK MAP TIPDRVYTIQS SF VLLW IFTLGGS YPGV
FGFR1_2fgi VL TEDNVM IADF LARDIHHI...DY KKTTNGRL VK MAP ALFDRIYTHQS SF VLLW IFTLGGS YPGV
INSR_1ir3 CM AHDFTV IGDF MTRDIYET...DY RKGGKGLL VR MAP SLKDGVFTTS M SF VVLW ITSLAEQ YQGL
IGF1R_1k3a CM AEDFTV IGDF MTRDIYET...DY RKGGKGLL VR MAP SLKDGVFTTY SF VVLW IATLAEQ YQGL
EPHB2_1jpa IL NSNLVC VSDF LSRFLEDDTSDPT TSALGGKI IR TAP AIQYRKFTSAS SY IVMW VMSYGER YWDM
EGFR_1m17 VL KTPQHV ITDF LAKLLGAE..EKE HAE.GGKV IK MAL SILHRIYTHQS SY VTVW LMTFGSK YDGI

αG αH αI

PYK2   .ENKDVIGVLEKGDRLPK DL PPVLYTL TRC DYDPSD R TELVCSLSDVYQMEKDIAM........
FAK   .KNNDVIGRIENGERLPM PN PPTLYSL TKC AYDPSR R TELKAQLSTILEEEKAQQEERMRMESR
SRC_2src .VNREVLDQVERGYRMPC PE PESLHDL CQC RKEPEE T EYLQAFLEDYFTSTEPQYQPGENL...
HCK_1qcf .SNPEVIRALERGYRMPR EN PEELYNI MRG KNRPEE T EYIQSVLDDFYTATESQYEEIP.....
LCK_1qpe .TNPEVIQNLERGYRMVR DN PEELYQL RLC KERPEDR T DYLRSVLEDFFTAT............
ABLI_1iep .DLSQVYELLEKDYRMER EG PEKVYEL RAC QWNPSDR S AEIHQAFETMFQ.............
CSK_1byg .PLKDVVPRVEKGYRKMDA DG PAVYEV KNC HLDAAMR S LQLREQLEHIKTHEL.........
TEK_1fvr .TCAELYEKLPQGYRLEK LN DDEVYDL RQC REKPYEE S AQILVSLNRMLEERKTYVNTTLYEKFT
KDR_1vr2 KIDEEFCRRLKEGTRMRA DY TTPEMYQT LDC HGEPSQE T SELVEHLGNLLQANA..........
FGFR1_2fgi .PVEELFKLLKEGHRMDK SN TNELYMM RDC HAVPSQR T KQLVEDLDRIVALT...........
INSR_1ir3 .SNEQVLKFVMDGGYLDQ DN PERVTDL RMC QFNPKME T LEIVNLLKDDLHPSFPEVSFFHSEENK
IGF1R_1k3a .SNEQVLRFVMEGGLLDK DN PDMLLEL RMC QYNPKMR S LEIISSIKEEMEPGFREVSFYYSEENK
EPHB2_1jpa .TNQDVINAIEQDYRLPP MD PSALHQL LDC QKDRNHR K QGIVNTLDKMIRNPNSLKA.......
EGFR_1m17 .PASEISSILEKGERLPQ PI TIDVYMI VKC MIDADSR K RELIIEFSKMARDPQRYLVIQGDERMH

Figure 4

4A:

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  1 MGSSHHHHHH SSGLVPRGSH MIAREDVVLN RILGEGFFGE VYEGVYTNHK GEKINVAVKT
 61 CKKDCTLDNK EKFMSEAVIM KNLDHPHIVK LIGIIEEEPT WIIMELYPYG ELGHYLERNK
121 NSLKVLTLVL YSLQICKAMA YLESINCVHR DIAVRNILVA SPECVKLGDF GLSRYIEDED
181 YYKASVTRLP IKWMSPESIN FRRFTTASDV WMFAVCMWEI LSFGKQPFFW LENKDVIGVL
241 EKGDRLPKPD LCPPVLYTLM TRCWDYDPSD RPRFTELVCS LSDVYQMEKD IAM
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4B:

PYK2-C1;   5'-TCCACAG CATATG ATTGCCCGTGAAGATGTGGT-3'   33 mer

4C:

PYK2-N2;   TGGAGAAGGACATTGCCATG TAG GTCGAC GAGAG (Origin)
                  5'-CTCTC GTCGAC CTA CATGGCAATGTCCTTCTCCA-3'   34 mer

4D:

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                                    TCTAGAAATAATTTTGTTTAACTTTAAGAAGGAGA
TATACCATGGGCAGCAGCCATCATCATCATCATCACAGCAGCGGCCTGGTGCCGCGCGGCAGCCATATG
          attgcc cgtgaagatg
1381 tggtcctgaa tcgtattctt ggggaaggct tttttgggga ggtctatgaa
ggtgtctaca
1441 caaatcacaa aggggagaaa atcaatgtag ctgtcaagac ctgcaagaaa
gactgcactc
1501 tggacaacaa ggagaagttc atgagcgagg cagtgatcat gaagaacctc
gaccacccgc
1561 acatcgtgaa gctgatcggc atcattgaag aggagcccac ctggatcatc
atggaattgt
1621 atccctatgg ggagctgggc cactacctgg agcggaacaa gaactccctg
aaggtgctca
1681 ccctcgtgct gtactcactg cagatatgca aagccatggc ctacctggag
agcatcaact
1741 gcgtgcacag ggacattgct gtccggaaca tcctggtggc ctcccctgag
tgtgtgaagc
1801 tgggggactt tggtctttcc cggtacattg aggacgagga ctattacaaa
gcctctgtga
1861 ctcgtctccc catcaaatgg atgtccccag agtccattaa cttccgacgc
ttcacgacag
1921 ccagtgacgt ctggatgttc gccgtgtgca tgtgggagat cctgagcttt
gggaagcagc
1981 ccttcttctg gctggagaac aaggatgtca tcggggtgct ggagaaagga
gaccggctgc
2041 ccaagcctga tctctgtcca ccggtccttt ataccctcat gacccgctgc
tgggactacg
2101 accccagtga ccggccccgc ttcaccgagc tggtgtgcag cctcagtgac
gtttatcaga
2161 tggagaagga cattgccatg
TAGGTCGACTAGAGCCTGCAGTCTCGACCATCATCATCATCATCATTAATAAAAGGGCG

AATTCCAGCACACTGGCGGCCGTTACTAGTGGATCCGGCTGCTAACAAAGCCCGAAAGGAAGCTGAGTT

GG
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